

H. Tsukamoto, et al.  
USSN 10/804,666  
Page 3

IN THE CLAIMS

Please **amend** claims 1, 2, 4, 5, 7, and 8 and **add** new claims 16-30 as shown in the Status of the Invention section, infra. No new matter has been added.

STATUS OF THE CLAIMS

Claim 1 (currently amended). A module for an optical device, comprising:

a solid-state image sensor having an effective pixel region formed on one side thereof;

an objective lens;

a lens holder for supporting said objective lens at a position opposite said effective pixel region and demarcating an optical path from said objective lens to said effective pixel region;

a ~~translucent~~transparent cover placed opposite said effective pixel region;

a bonding portion having substantially uniform thickness for fixedly bonding said ~~translucent~~transparent cover to said solid-state image sensor so as to form a sealed space enclosing said effective pixel region between said one side of said solid-state image sensor and said ~~translucent~~transparent cover; and

a joint portion for fixedly joining said lens holder to said ~~translucent~~transparent cover; wherein

said objective lens is positioned via said joint portion and said bonding portion with respect to said effective pixel region with said one side of said solid-state image sensor defined as a positioning reference, and

said bonding portion consists of a bonding agent having substantially uniform thickness and formed by patterning on said one side of said solid-state image sensor in a shape enclosing said effective pixel region, or on the surface of said ~~translucent~~transparent cover opposite said one side of said solid-state image sensor in a shape enclosing said effective pixel region when said ~~translucent~~transparent cover is placed opposite said effective pixel region.

Claim 2 (currently amended). The module for an optical device as set forth in claim 1, wherein said ~~translucent~~transparent cover is formed to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 3 (original). The module for an optical device as set forth in claim 2, comprising:

- an image processing device; and
- a wiring substrate, wherein
- said image processing device is bonded to said wiring substrate, and
- said solid-state image sensor is bonded to a plane portion of said image processing device

Claim 4 (currently amended). The module for an optical device as set forth in claim 1, wherein said patterning of said bonding portion is performed by removing unnecessary portion of a photosensitive bonding agent coated with substantially uniform thickness on said one side of said solid-state image sensor, or on the surface of said ~~translucenttransparent~~ cover opposite said one side of said solid-state image sensor.

Claim 5 (currently amended). The module for an optical device as set forth in claim 4, wherein said ~~translucenttransparent~~ cover is formed to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 6 (original). The module for an optical device as set forth in claim 5, comprising:

- an image processing device; and
- a wiring substrate, wherein
- said image processing device is bonded to said wiring substrate, and
- said solid-state image sensor is bonded to a plane portion of said image processing device

Claim 7 (currently amended). The module for an optical device as set forth in claim 1, wherein said patterning of said bonding portion is performed by printing a bonding agent in a frame-like shape with substantially uniform thickness on said one side of said solid-state image sensor, or on the surface of said ~~translucenttransparent~~ cover opposite said one side of said solid-state image sensor.

Claim 8 (currently amended). The module for an optical device as set forth in claim 7, wherein said ~~translucent~~transparent cover is formed to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 9 (original). The module for an optical device as set forth in claim 8, comprising:

- an image processing device; and
- a wiring substrate, wherein
- said image processing device is bonded to said wiring substrate, and
- said solid-state image sensor is bonded to a plane portion of said image processing device

Claim 10 (withdrawn). The module for an optical device as set forth in claim 1, wherein said patterning of said bonding portion is performed by affixing an adhesive sheet formed in a frame-like shape with substantially uniform thickness on said one side of said solid-state image sensor, or on the surface of said translucent cover opposite said one side of said solid-state image sensor.

Claim 11 (withdrawn). The module for an optical device as set forth in claim 10, wherein said translucent cover is formed to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 12 (withdrawn). The module for an optical device as set forth in claim 11, comprising:

- an image processing device; and
- a wiring substrate, wherein
- said image processing device is bonded to said wiring substrate, and
- said solid-state image sensor is bonded to a plane portion of said image processing device

Claim 13 (withdrawn). The module for an optical device as set forth in claim 1, wherein said patterning of said bonding portion is performed by coating a bonding agent with use of dispense method in a frame-like shape with substantially uniform thickness on said one side of said solid-state image sensor, or on the surface of said translucent cover opposite said one side of said solid-state image sensor.

Claim 14 (withdrawn). The module for an optical device as set forth in claim 13, wherein said translucent cover is formed to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 15 (withdrawn). The module for an optical device as set forth in claim 14, comprising:

- an image processing device; and
- a wiring substrate, wherein
- said image processing device is bonded to said wiring substrate, and
- said solid-state image sensor is bonded to a plane portion of said image processing device.

Claim 16 (new). A method for manufacturing a module for an optical device comprising a solid-state image sensor having an effective pixel region formed on one side thereof; an objective lens; a lens holder for supporting said objective lens at a position opposite said effective pixel region and demarcating an optical path from said objective lens to said effective pixel region; a transparent cover placed opposite said effective pixel region; a bonding portion having substantially uniform thickness for fixedly bonding said transparent cover to said solid-state image sensor so as to form a sealed space enclosing said effective pixel region between said one side of said solid-state image sensor and said transparent cover; and a joint portion for fixedly joining said lens holder to said transparent cover; wherein said objective lens is positioned via said joint portion and said bonding portion with respect to said effective pixel region with said one side of said solid-state image sensor defined as a positioning reference, comprising step of:

forming said bonding portion by patterning a bonding agent with substantially uniform thickness on said one side of said solid-state image sensor in a shape enclosing said effective pixel region, or on the surface of said transparent cover opposite said one side of said solid-state image sensor in a shape enclosing said effective pixel region when said transparent cover is placed opposite said effective pixel region.

Claim 17 (new). The method as set forth in claim 16, further comprising step of forming said transparent cover so as to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 18 (new). The method as set forth in claim 17, further comprising steps of:  
bonding an image processing device to a wiring substrate, and  
bonding said solid-state image sensor to a plane portion of said image processing device.

Claim 19 (new). The method as set forth in claim 16, wherein said step of forming said bonding portion further includes steps of:  
coating a photosensitive bonding agent with substantially uniform thickness on said one side of said solid-state image sensor, or on the surface of said transparent cover opposite said one side of said solid-state image sensor; and  
removing, with use of photolithography, unnecessary portion of said photosensitive bonding agent coated on said one side of said solid-state image sensor, or on the surface of said transparent cover opposite said one side of said solid-state image sensor.

Claim 20 (new). The method as set forth in claim 19, further comprising step of forming said transparent cover so as to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 21 (new). The method as set forth in claim 20, further comprising steps of:  
bonding an image processing device to a wiring substrate, and  
bonding said solid-state image sensor to a plane portion of said image processing device.

Claim 22 (new). The method as set forth in claim 16, wherein said step of forming said bonding portion is performed by printing a bonding agent in a frame-like shape with substantially uniform thickness on said one side of said solid-state image sensor, or on the surface of said transparent cover opposite said one side of said solid-state image sensor.

Claim 23 (new). The method as set forth in claim 22, further comprising step of forming said transparent cover so as to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 24 (new). The method as set forth in claim 23, further comprising steps of:  
bonding an image processing device to a wiring substrate, and  
bonding said solid-state image sensor to a plane portion of said image processing device.

Claim 25 (new). The method as set forth in claim 16, wherein said step of forming said bonding portion is performed by affixing an adhesive sheet formed in a frame-like shape with substantially uniform thickness on said one side of said solid-state image sensor, or on the surface of said transparent cover opposite said one side of said solid-state image sensor.

Claim 26 (new). The method as set forth in claim 25, further comprising step of forming said transparent cover so as to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 27 (new). The method as set forth in claim 26, further comprising steps of:  
bonding an image processing device to a wiring substrate, and  
bonding said solid-state image sensor to a plane portion of said image processing device.

Claim 28 (new). The method as set forth in claim 16, wherein said step of forming said bonding portion is performed by coating a bonding agent with use of dispense method in a frame-like shape with substantially uniform thickness on said one side of said solid-state image sensor, or on the surface of said transparent cover opposite said one side of said solid-state image sensor.

Claim 29 (new). The method as set forth in claim 28, further comprising step of forming said transparent cover so as to have a plane size smaller than the plane size of said one side of said solid-state image sensor.

Claim 30 (new). The method as set forth in claim 29, further comprising steps of:  
bonding an image processing device to a wiring substrate, and  
bonding said solid-state image sensor to a plane portion of said image processing device.